

Flight Scientist Report
Monday 05/16/2022 ACTIVATE RF154

Flight Type: Statistical Survey Flight
Flight Route: KLFI ATLIC ZIBUT DARUX ZIBUT ATLIC KLFI
Special Notes:

King Air

Pilot report (Coldsnow):

Mission was briefed (KLFI ATLIC ZIBUT DARUX ZIBUT ATLIC KLFI) but an adjustment to DARUX point was made (Changed to 36N 069 25W). Winds were W/SW at 20-35 knots. Four dropsonds were released and all were nominal (30 miles from ZIBUT, 30 miles from DARUX, 30 miles beyond midpoint between ZIBUT and DARUX and 30 miles before ATLIC). Timing was within 10 minutes of Falcon the entire day. A flight path deviation was needed after releasing the last dropsond to avoid weather. The RSP shutter was closed for approximately 5 minutes due to some high clouds.

Flight scientist report (Seaman):

Falcon

Pilot report (Slover):

ACTIVATE statistical survey flight. About half cloudy module and half clear module. Flown from KLFI ATLIC ZIBUT N3600/W06925 ZIBUT ATLIC KLFI as planned. Clouds were mostly below 4000' MSL and bottomed out about 900' MSL. Some convective activity off the track nearby and then at ATLIC where deviations were required to get through. Overgross used for extra fuel for APU cooling use and thunderstorm avoidance.

Flight scientist report (Seaman):

RF154

5/16/2022 Flight 2 of 2

Takeoff: 13:11 utc

Flight path:

KLFI ATLIC ZIBUT 36.00N/69.42W ZIBUT ATLIC KLFI (but we diverted around weather before ATLIC on return)

Ops Notes:

Severe weather near LaRC on return forced us to turn off instruments earlier than usual to give pilots freedom to focus on flying.

Instrument notes:
All operated nominally.

Science notes:

Sonde drops:

Sonde drops were intentionally offset from the drops on flight 1 of the day by about 30 Nm.

- 1) 30 Nm past ZIBUT
- 2) 30 Nm before turn around point
- 3) roughly 30 Nm after midpoint between ZIBUT and turn around point
- 4) OUTES (near coast)

Winstead:
Afternoon:

Two filters were loaded into filter holders for aerosol sampling in clear air.

17:23:30 Filter A & B ON

18:08:35 Filter A & B OFF

19:19:30 Filter A & B ON again

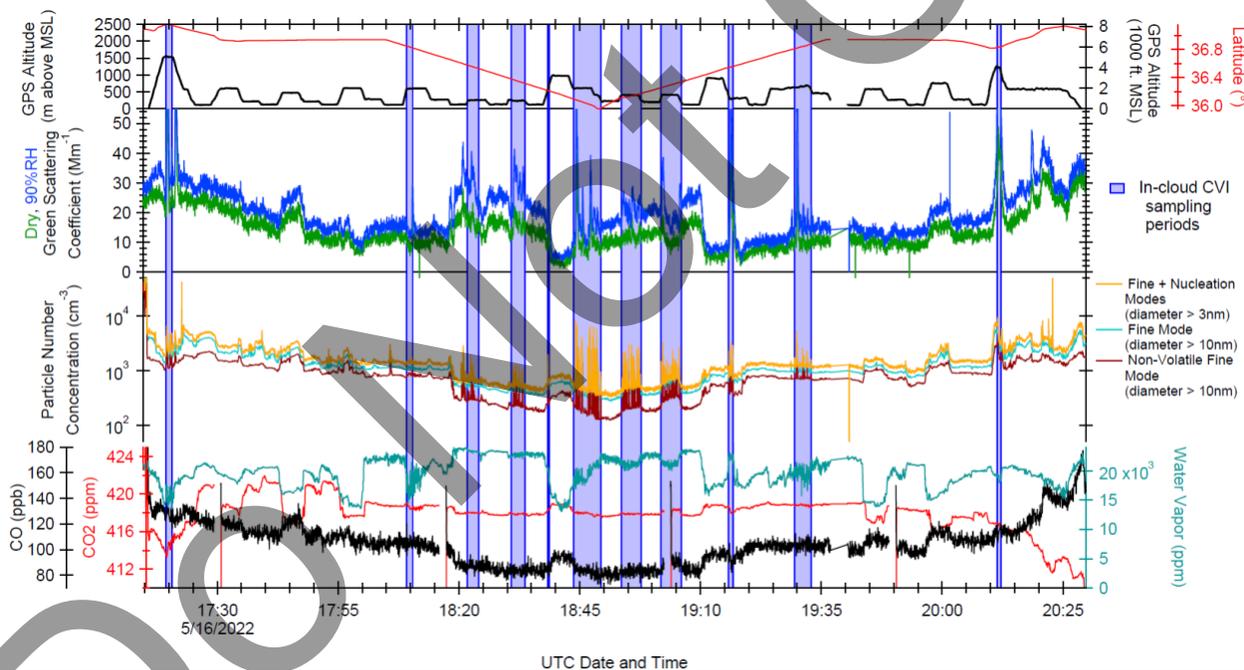
19:28:00 Filter A & B OFF

19:36:00 Filter A & B ON

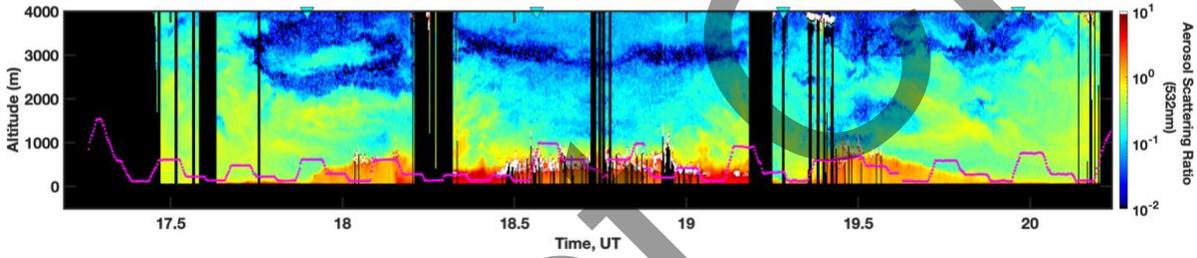
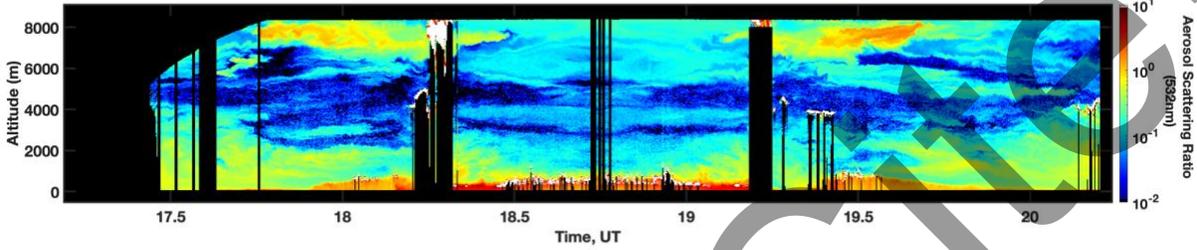
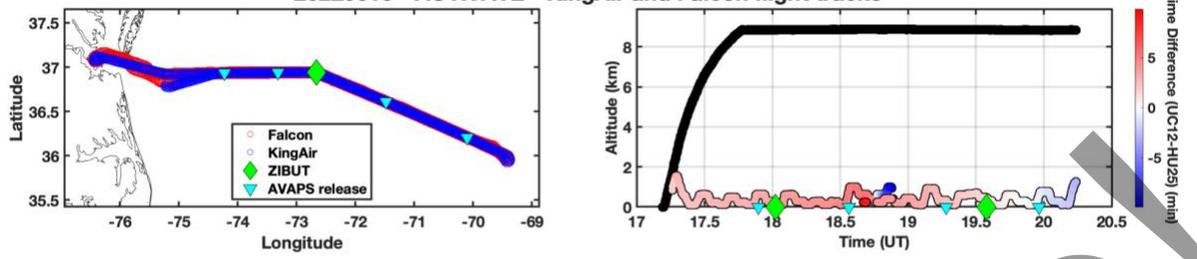
19:41 REVEAL restored and DAQ software restarted after REVEAL was lost and restored by restarting WINDS computer.

20:08:30 Filter A & B OFF

20:20:30 WCM & Humidifier off in preparation for landing



20220516 - ACTIVATE - KingAir and Falcon flight tracks



Do Not

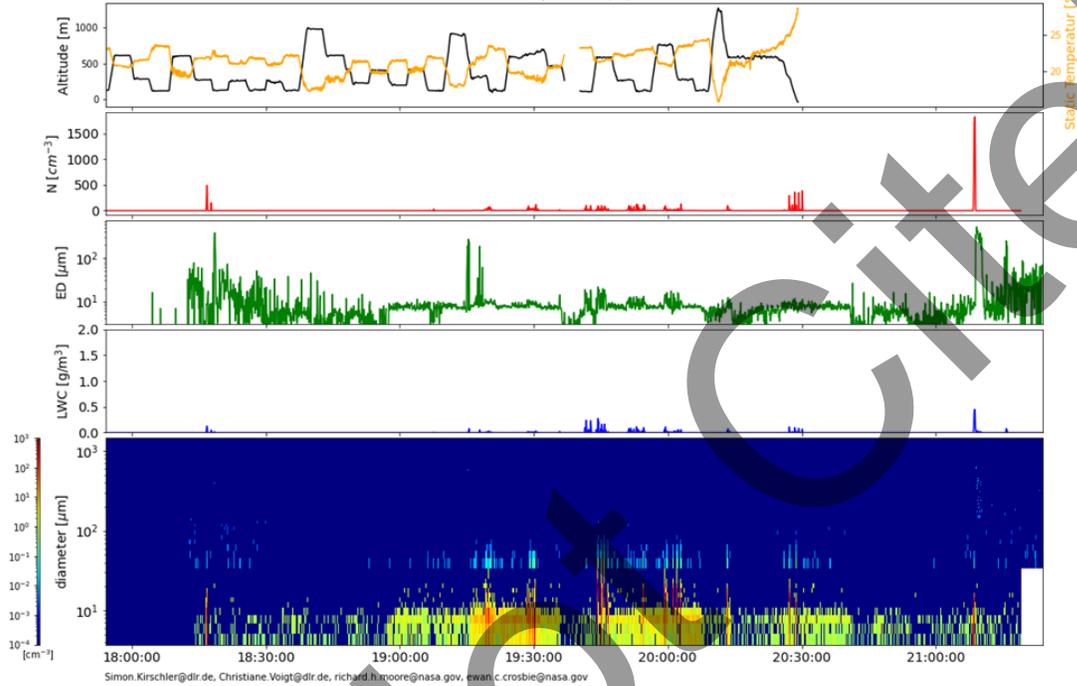
Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie

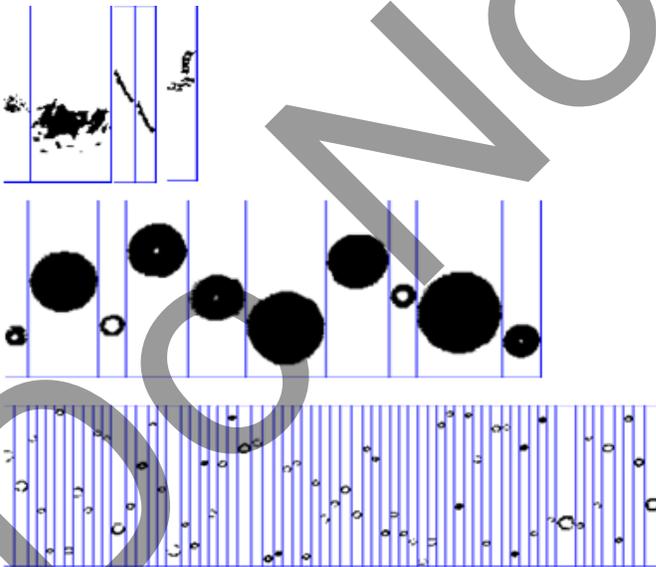
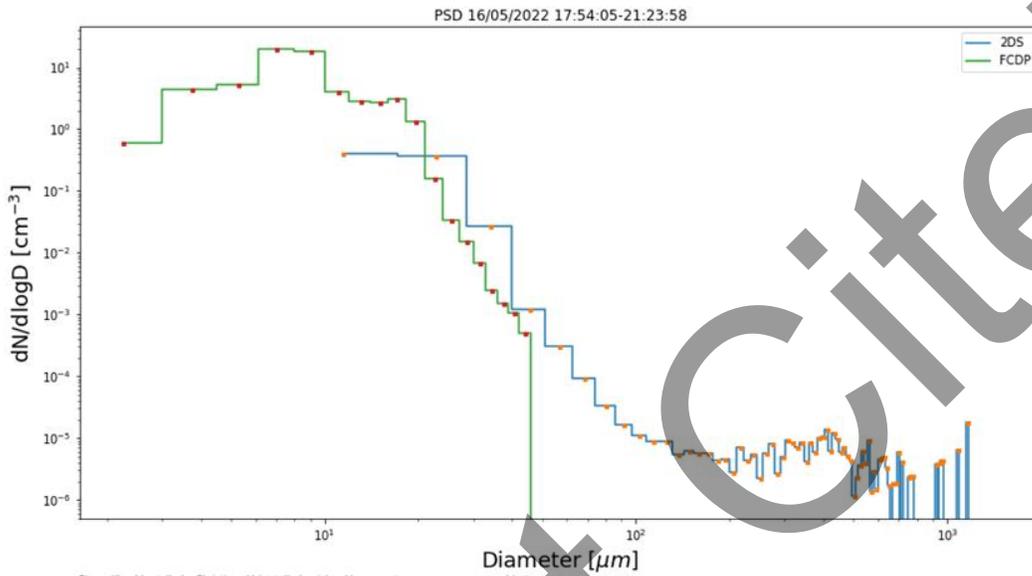


Cloud Probes (FCDP & 2DS) Quicklook 16/05/2022 17:54:05-21:23:58



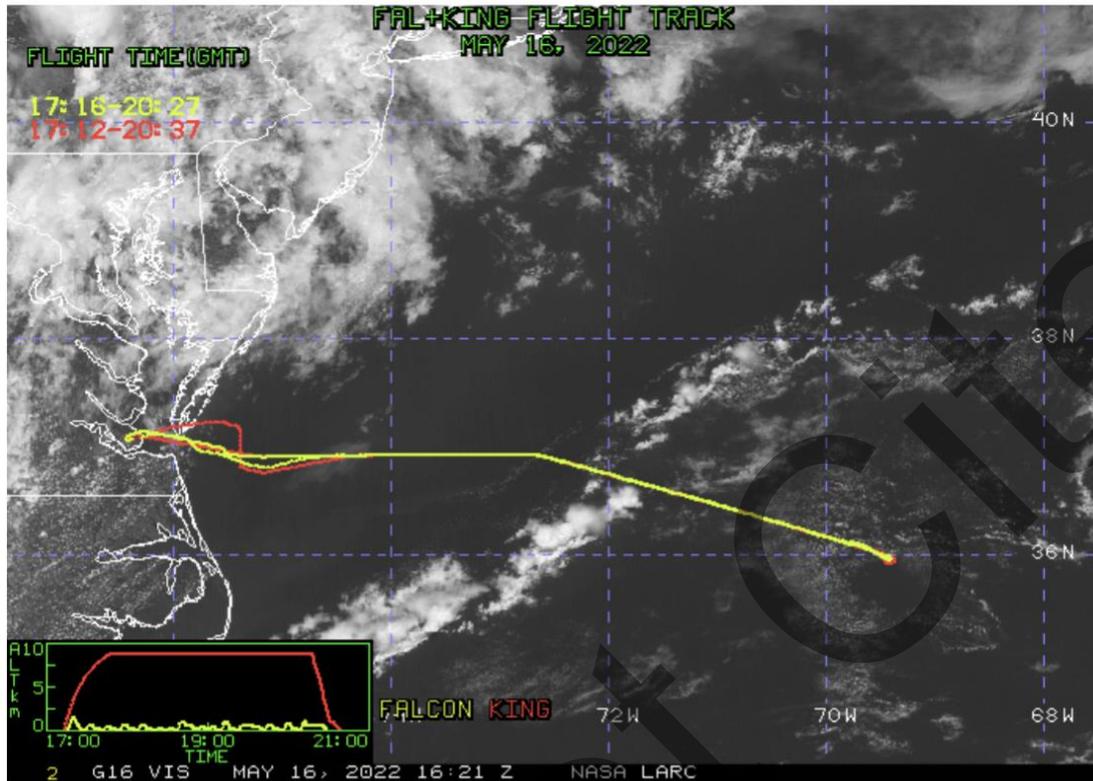
PSD ACTIVATE

preliminary data, only for quicklook use
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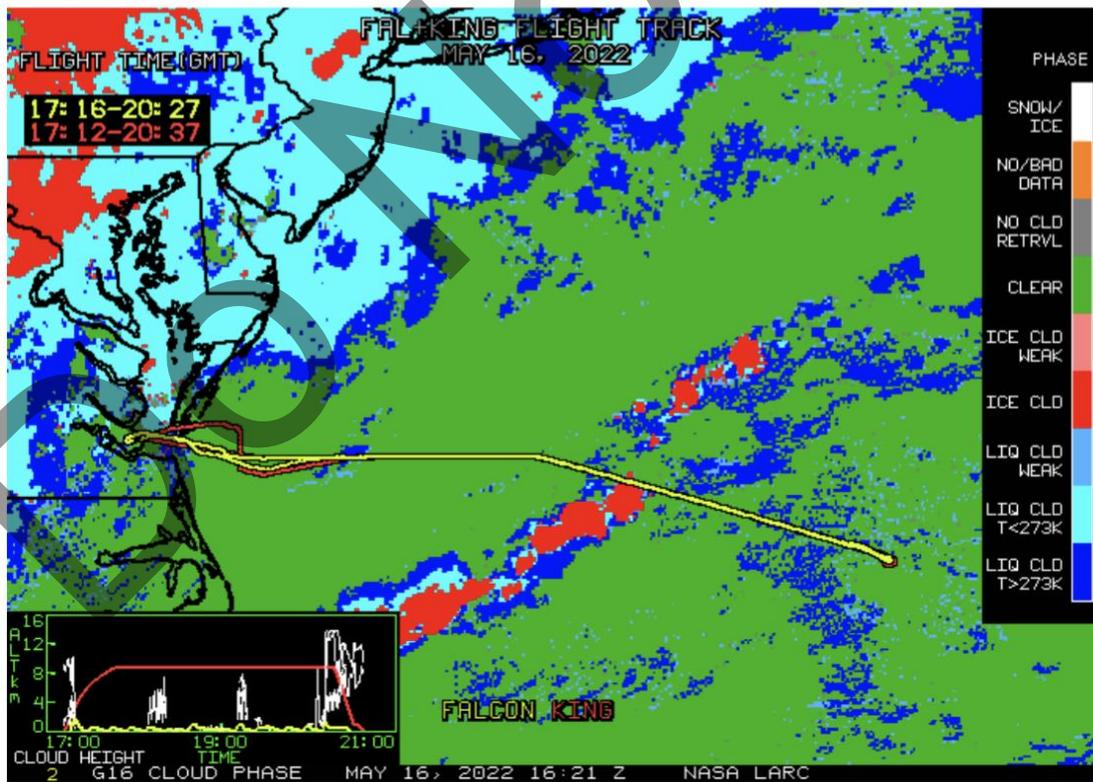


Only pure liquid shallow clouds with
Precip and large Bioaerosol.

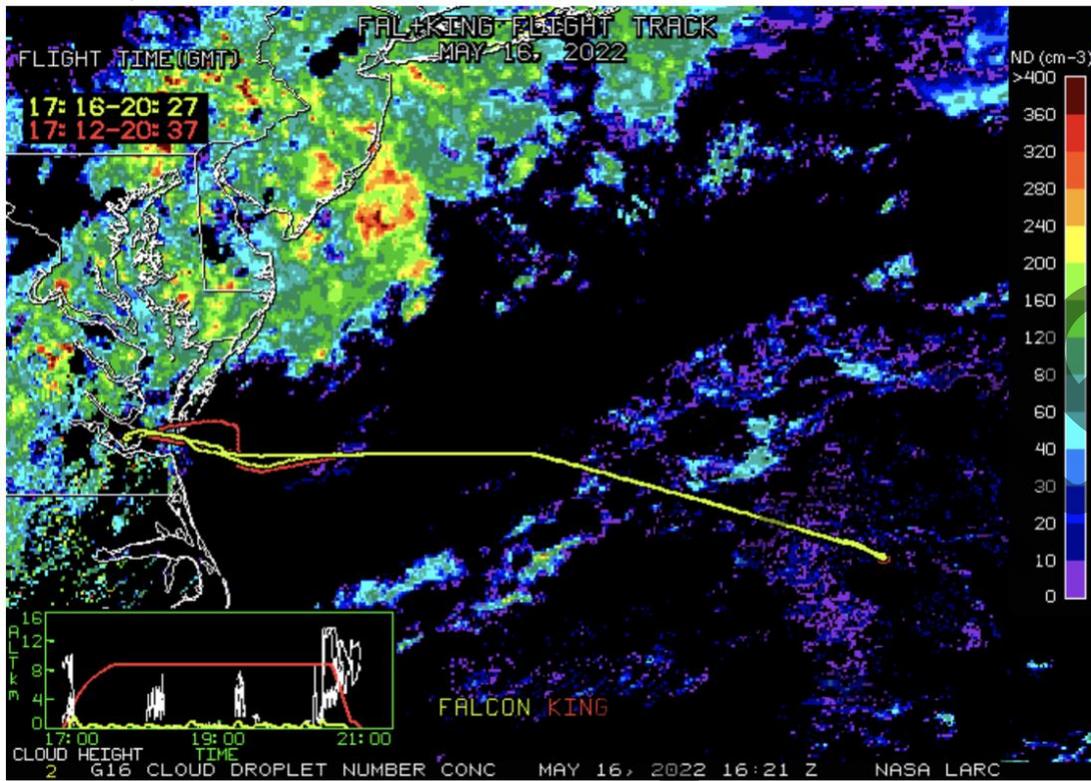
NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 154, 16:21 UTC May 16, 2022
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

